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(12) Patent:

(11) CA 640991

(54) SURGICAL GLOVE PACKAGE

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ABSTRACT:

CLAIMS: Show all claims

\*\*\* Note: Data on abstracts and claims is shown in the official language in which it was submitted.

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(45) <u>Issued:</u>

May 8, 1962

(22) Filed:

(41) Open to Public

Inspection:

(52) Canadian Class (CPC):

217/39

(51) International Class (IPC):

N/A

Patent Cooperation Treaty (PCT):

No

(30) Application priority data:

None

Availability of licence:

N/A

Language of filing:

Unknown

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19:

This invention relates to a package retaining surgical gloves therein during a sterilization treatment and maintaining them thereafter in sterilized condition until use.

The handling of sterilized surgical gloves presents serious problems to those charged with the important responsibility of handling them during and after sterilization. Sanitary standards prohibit the use of gloves which have become unsterile by contact with people or objects. The present invention satisfies a definite need in providing a surgical glove package which facilitates the handling of surgical gloves during and after sterilization.

The present invention provides a surgical glove package in which the surgical gloves can be supplied to the consumer. The surgical gloves packaged therein can be sterilized beforehand by the supplier, or they can be supplied in a clean but unsterile condition for sterilization by the consumer. In either case, the gloves are intended to be sterilized while enclosed within the package.

In the sterilization treatment, a large number of these packages can be placed in a heated chamber, preferably in racks so that the packages are spaced apart from each other. The package containing the sterilized gloves may then be stored until use. The package, when opened to obtain access to the sterile gloves, may be destroyed or, if undamages, used once again to re-sterilize a pair of gloves packaged therein.

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The present invention provides a surgical glove package which will retain the gloves therein in an upright position without folds and creases, so as to afford the sterilizing medium access to all surface areas of the glove, both inside and outside. The present invention also provides a package which is readily opened to permit removal of the gloves from the package in such fashion that the gloves are not contaminated or rendered unsterile by contact with unsterilized surfaces.

In the surgical glove package of the present invention, the gloves are retained within a folder which is inserted within an outer envelope. The inside of the folder includes a pair of supports on which the gloves are accommodated and also means overlying the upper tips of the fingers to maintain the fingers in upright position. When the folder is closed, the gloves are retained therein in upright condition with the wrist portions held open by the supports to afford the sterilizing medium access to all surfaces, both interior and exterior, during the sterilization operation. The folder is inserted within the outer envelope in such fashion that the folded edge thereof is at the open end of the envelope, so that when the outer envelope is opened and the inner folder is permitted to fall onto a surface, the inner folder will open face up, preventing the gloves from coming into contact with the unsterilized surface.

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2	of the surgical glove package of the present inven-
3	tion;
4	Figure 2.1s a face view of the sheet which
5	forms the inner folder in unfolded condition;
6	Figure 3 is a perspective view of the inner
7	folder;
8	Figure 4 is a plan view of the inner folder
9	showing how the gloves are retained therein in upright
10	position; and
11	Figure 5 is a cross-sectional view taken along
12	the line 5-5 of Figure 4, looking in the direction of the
13	arrows.
14	Referring to the drawing, the surgical glove
15	package of the present invention comprises an outer en-
16	velope 10 and a folder 11 which is of the proper shape
17	and size to be inserted within the envelope. If the
18	gloves are to be sterilized by heated steam, both the
19	envelope and folder are made of paper or other suit-
20	able material capable of being penetrated by the steam
21	during the sterilization process. The material should
22	have the stiffness, rigidity and tensile strength nec-
23	essary to withstand handling without tearing or excessive
24	loss in shape.
25	The folder 11, shown in Figure 3, is made
26	initially from a sheet having the general configuration
27	shown in Figure 2. The sheet shown in Figure 2 is
28	folded at the center along the crease line 13 and along
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1 parallel crease lines 14 and 15 at distances equally 2 spaced from the center line 13 on opposite sides 3 thereof. These fold lines divide the sheet into panels 4 16 and 17 hinged together by the center fold line, and 5 flaps 18 and 19 hinged to the outer edges of the panels б 16 and 17, respectively. 7 The upper edge of the sheet shown in Figure 2 8 is formed with a tab portion 20 which, when folded along 9 a line 21 joining the upper edges of the side flaps 18 and 19, provides an upper flap which extends continuously 10 11 across the upper edges of the panels 16 and 17. Similarly, 12 the lower edge of the sheet is formed with a double-humped 13 tab portion 22 which, when folded along a line 23 joining 14 the lower edges of the side flaps 18 and 19, provides a lower flap which extends continuously across the lower 15 16 edges of the panels 16 and 17. When folded in the manner 17 illustrated in Figure 3, each of the tapering supports 24 18 forms an upstanding support for the wrist portion of a 19 surgical glove 25. Needless to say, when the tab portions 20 20 and 22 are folded inwardly in the manner shown in 21 Figure 3, their creases along the center line 13 are 22 reversed. 23 The gloves 25 are inserted in the folder 11 24 with the wrist portions thereof turned back, as shown in Figure 4. With the wrist portion turned back, the 25 26 open end of the ghove is placed on the upstanding sup-27 porting flap 24 in such position as to permit the hand

portion of the glove to lie flat against the respective

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panel. The upper tips of the fingers are tucked under 1 2 the upper flap 20 to prevent the fingers from folding back and forming creases. The flaps 18 and 19 are then 3 4 folded back over the adjacent gloves, and the folder 5 again folded in wallet fashion along the center fold 6 line to bring the flaps 18 and 19 in face-to-face relationship. The folder 11 is then inserted within the 7 8 envelope 10 in the manner shown in Figure 1, with the folded edge at the open end of the envelope. 9 The envelope is closed by folding the flap 26 10 of the envelope along its crease line 27. The flap 26 11 is held closed by the use of a strip of adhesive-coated 12 tape 28, preferably a pressure-sensitive adhesive tape, 13 which will keep the flap 26 closed even when subjected 14 to steam during the sterilization breatment. 15 16 The gloves may be packaged in the manner described at the time of sale or prior to sterilization. 17 18 The package may be used in various types of sterilization 19 treatment. However, it is particularly suited to sterilization by steam, that is to say, either wet or dry 20 21 steam at high temperature. Because of the manner in 25 which the fingers are retained in upright condition without creases or folds, there are no surfaces of the 53 24 glove which are isolated from the steam or insulated 25 from the heat thereof. The steam readily finds its 26 way between the outer surface of the glove and the folded-27 back wrist portion thereof. Entry of the steam between 28 these surfaces of the glove is facilitated by the

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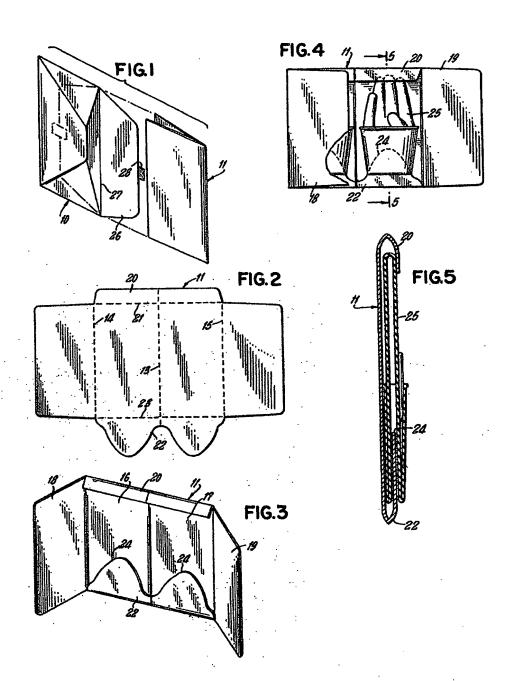
position of the thumb of the glove therebetween as 2 shown in Figure 4. Access to the inside of the glove, 3 including the fingers, is possible by virtue of the 4 fact that the glove is held open at the wrist by the 5 upstanding support 24 and by the additional fact that 6 the fingers are retained by the upper flap 20 in upp-7 right position. 8 During the sterilization treatment, it is 9 advisable to maintain the packages separated so that 10 the steam has access to both sides of the envelope. 11 Suitable racks or trays may be used for this purpose. 12 After the sterilization treatment, the packages may 13. be stored even for long periods of time without danger that the gloves will become unsterile. When the gloves 14 15 are to be used, the envelope is opened over a surface 16 and the inner folder 11 slidably removed therefrom. 17 The folder can be opened on a table surface without 18 danger of the gloves coming into contact therewith. The folder 11 can be dislodged from the envelope by 19 shaking the envelope over a table surface, directing 20 the folded edge thereof toward the table surface, so 21 55 that if the folder opens up in falling onto the table 23 surface, the outer surface will lie against the table 24 surface, protecting the gloves from direct contact there-25 with. The package can, of course, be reused, provided that it has not been torn or damaged in handling. 26

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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A package for retaining surgical gloves during and after sterilization comprising a folder formed from a foldable sheet and a pair of surgical gloves within the folder, said folder comprising two glovesreceiving panels separated by a center fold line, a lower flap folded upwardly along a fold line and having an upstanding tapered glove mount overlying each panel, each glove mount receiving a glove thereon with the wrist portion of the glove turned inside-out and extending upwardly toward the fingers of the glove, the tapered mount being inserted within the glove to maintain the inside of the glovewopen during sterilization, and an upper flap for each panel folded downwardly along a fold line to overlie the finger tips of a glove within the respective panel to maintain the hand portion of the glove open during sterilization, the glove panels being folded together along said center fold line.

A package for retaining surgical gloves during and after sterilization comprising a folder formed from a foldable sheet and a pair of surgical gloves within the folder, said folder comprising two glovereceiving panels separated by a center fold line, a lower flap folded upwardly along a fold line and having an upstanding tapered glove mount overlying each panel. each glove mount receiving a glove thereon with the wrist portion of the glove turned inside-out and extending upwardly toward the fingers of the glove, the tapered mount being inserted within the glove to maintain the inside of the glove open during sterilization, an upper flap for each panel folded downwardly along a fold line to overlie the finger tips of a glove within the respective panel to maintain the hand portion of the glove open during sterilization, and a side flap ' connected by a fold line to the outer edge of one of the panels to permit the side flap to be folded back over the glove retained of the respective panel, the side flap being interposed between the gloves when the panels are folded together along the center fold line.



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